孕龍科技股份有限公司
Zeroplus Technology Co., Ltd.

SPECIFICATION

MODEL: B12004-Serial GPIO IBPI

PART NO： _____

VERSION： V1.02

Approver		Check	Design
GM	PM		

Customer Confirm

＊Please fax the file to Zeroplus Technology after signing.

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Revision History

Revision No.	History	Page No.	Date	Reviser
V1.00	First Version	2-14	2013-01-26	Nancy
V1.02	In the Image Encode, Activity is showed in green, Locate in blue, Error in red.	2-16	2013-6-10	Anderson

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Content

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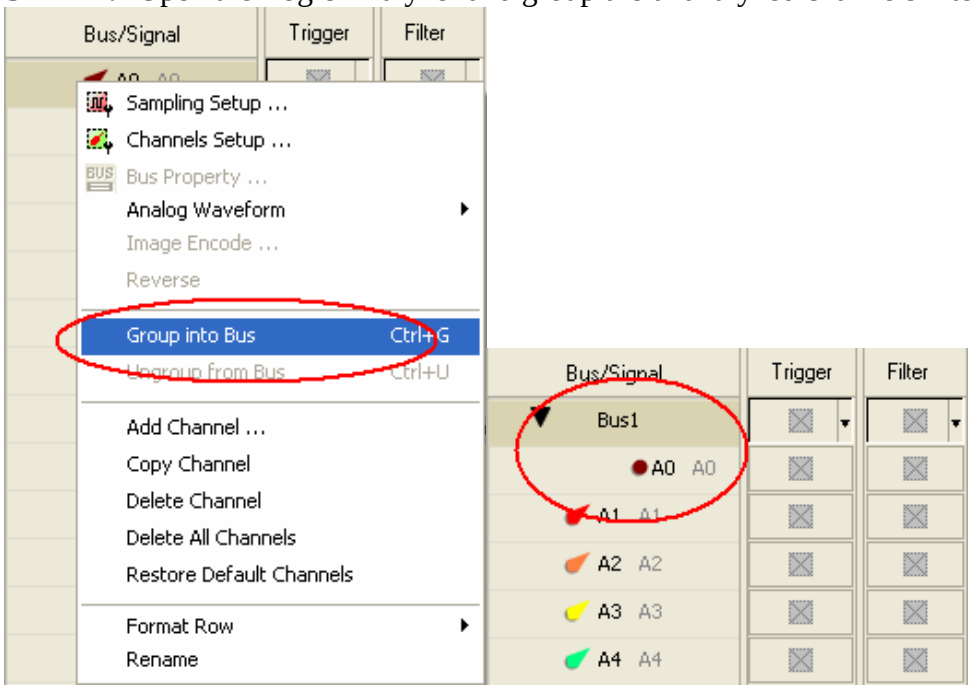
1 Software Register

Please register the software as the following steps:

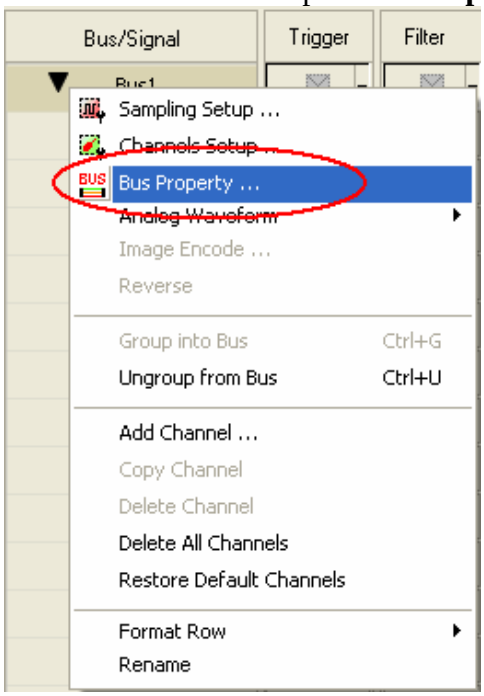
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ Remark2: We won't have additional notice for you, when there is any modification of the module specification. If there is any unconformity caused by module version upgrade, users should take the module software as the standard.

STEP 1. Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key.**



STEP 2. Select **Bus 1**, then press **Right Key** on the mouse to list the menu, then click **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



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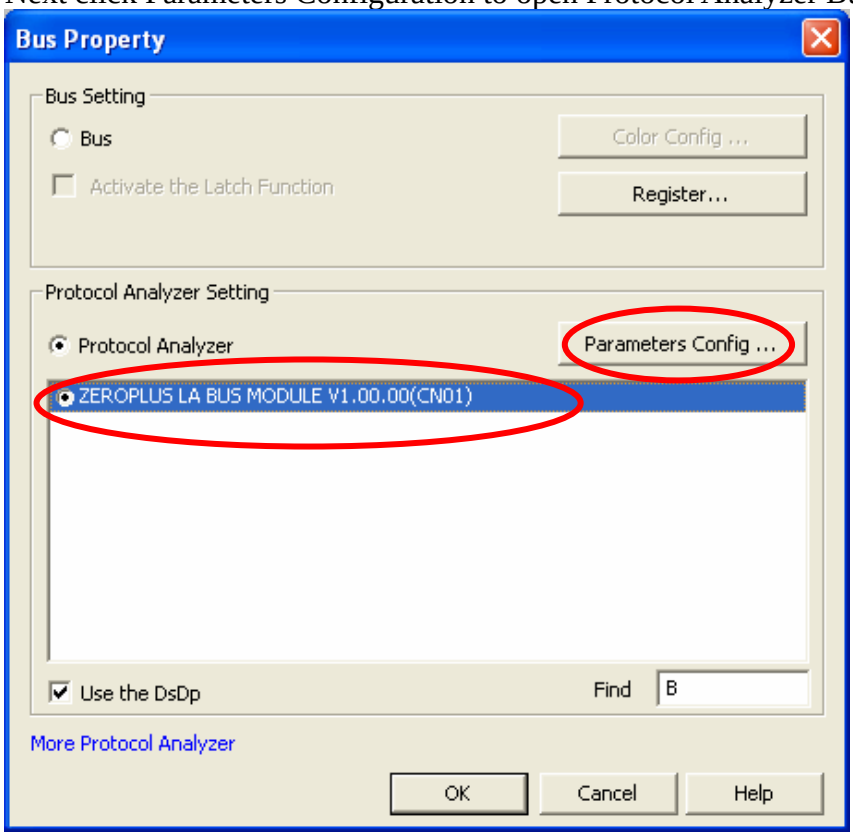
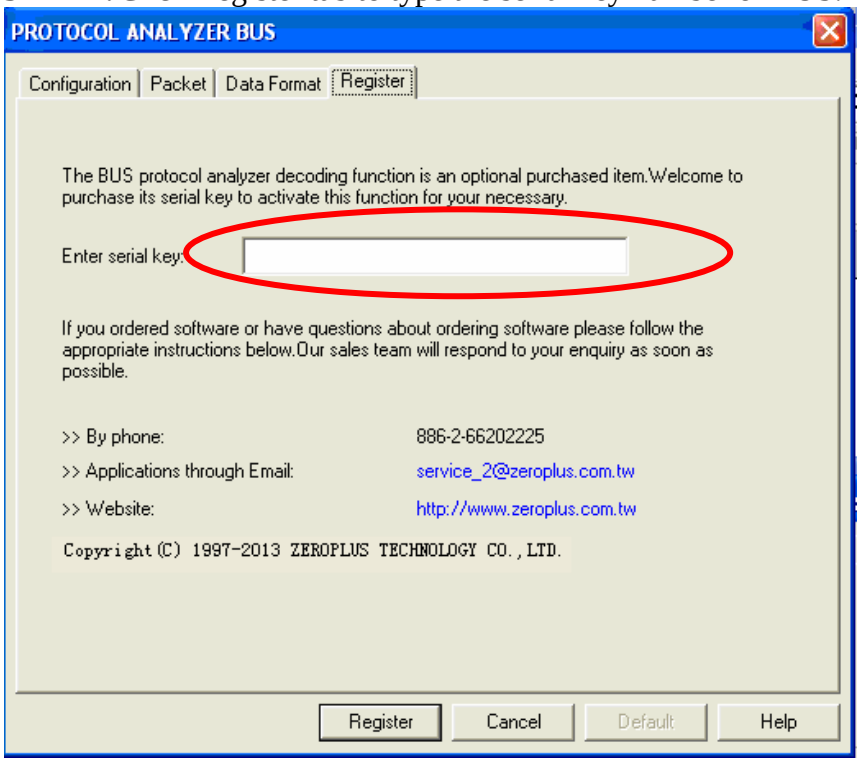
STEP 3. Select the Protocol Analyzer, and then choose **ZEROPLUS LA BUS MODULE V1.00.00 (CN01)**. Next click Parameters Configuration to open Protocol Analyzer Bus dialog box.



STEP 4. Click Register tab to type the serial key number of BUS. Then click Register.



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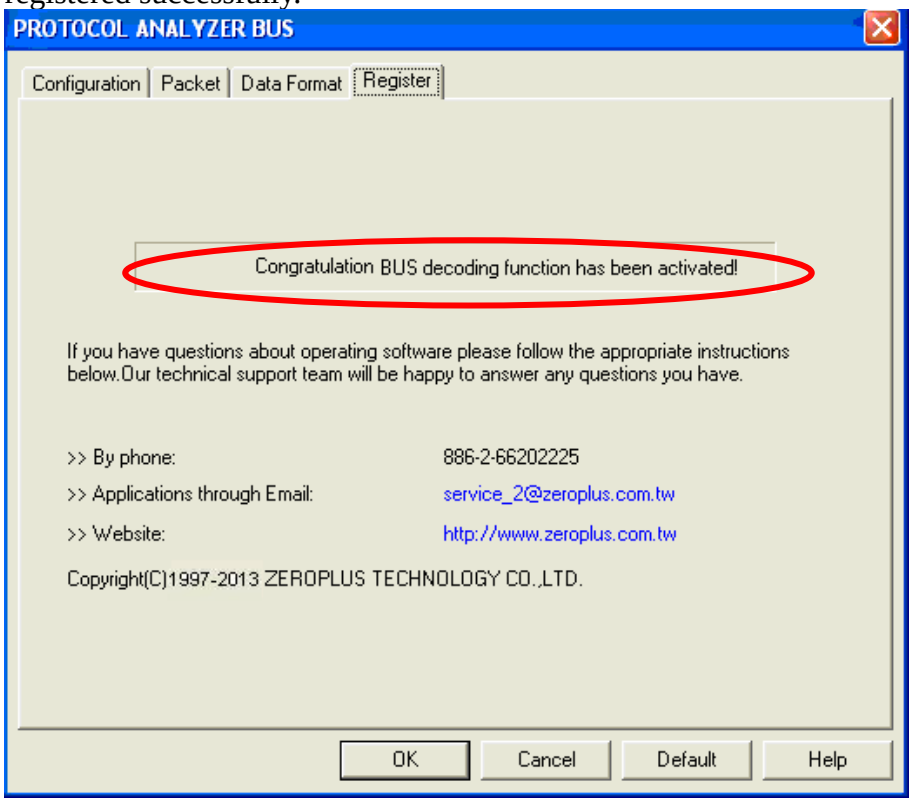
STEP 5. After click the Register button, following dialog box will appear, it denotes that the BUS has been registered successfully.



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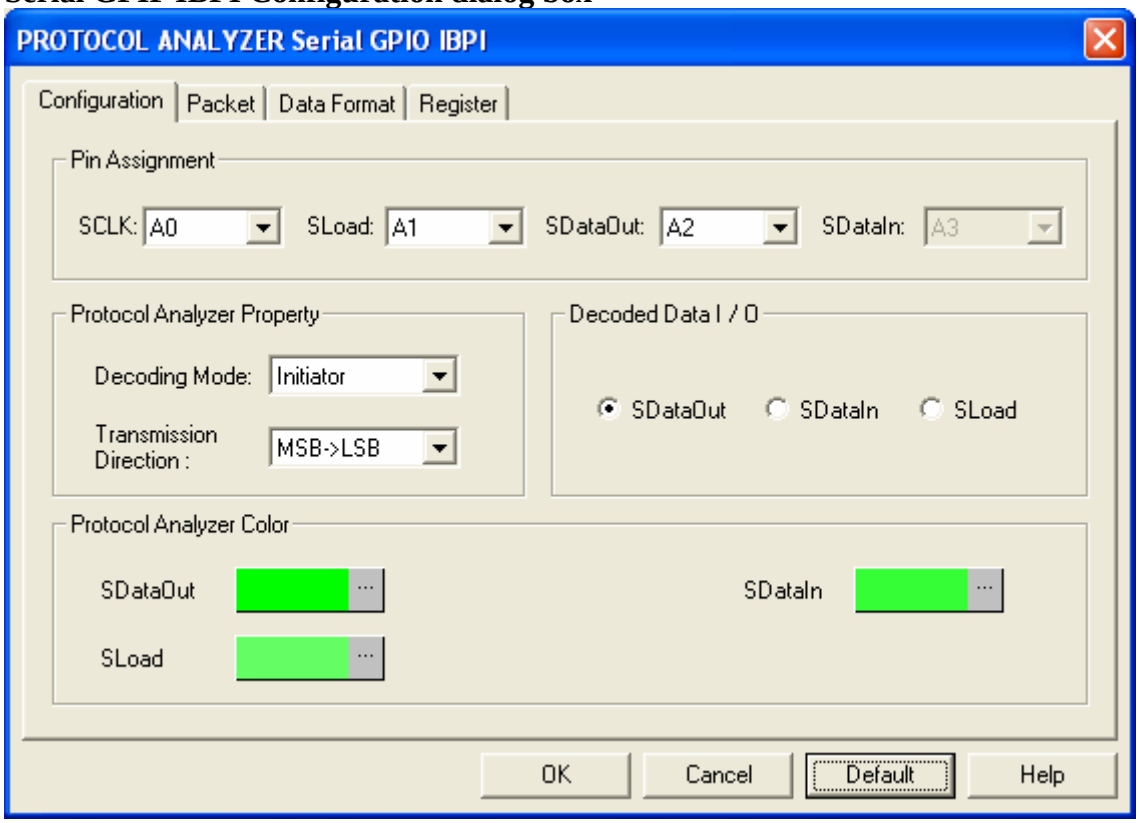
2 User Interface

Please refer to the below images to do settings of **GPIO IBPI** module.

Serial GPIP IBPI Configuration dialog box



Pin Assignment:
SCLK is the clock line, it is A0 by default; SLoad is the signal line for a new data flow, it is A1 by default; SDataOut is the signal line for data output, it is A2 by default; SDataIn is the signal line for data input, it is A3 by default.

Protocol Analyzer Property:
Decoding Mode: There are Initiator and Target to select, it is Initiator by default.
Transmission Direction: Users can select MSB→LSB or LSB→MSB, it is MSB→LSB by default.

Decoded Data I/O：
Users can select SDataOut, SDataIn and SLoad, it is SDataOut by default. The data format of different port is not the same. When the SDataOut is selected, SDataIn is not available; when the SDataIn is selected, SDataOut is not available; when the SLoad is selected, both SDataOut and SDataIn are not available.

Protocol Analyzer Color:
The color can be varied by users.

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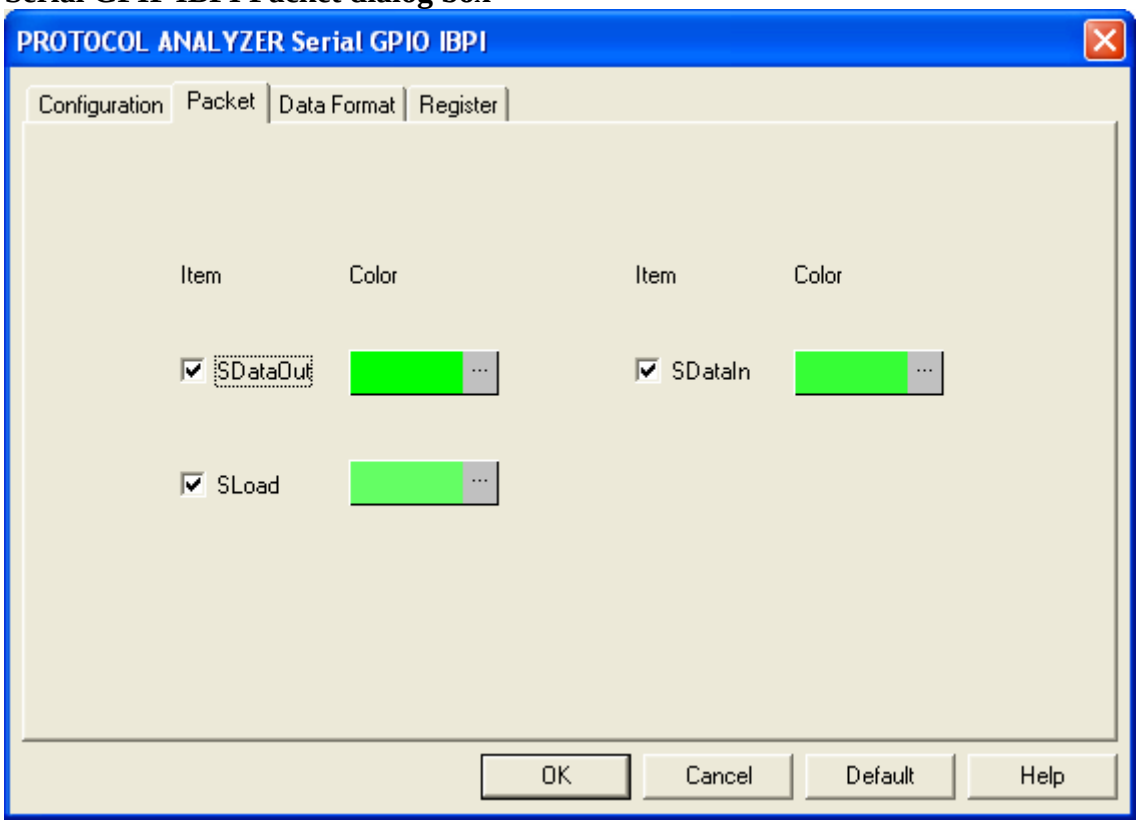
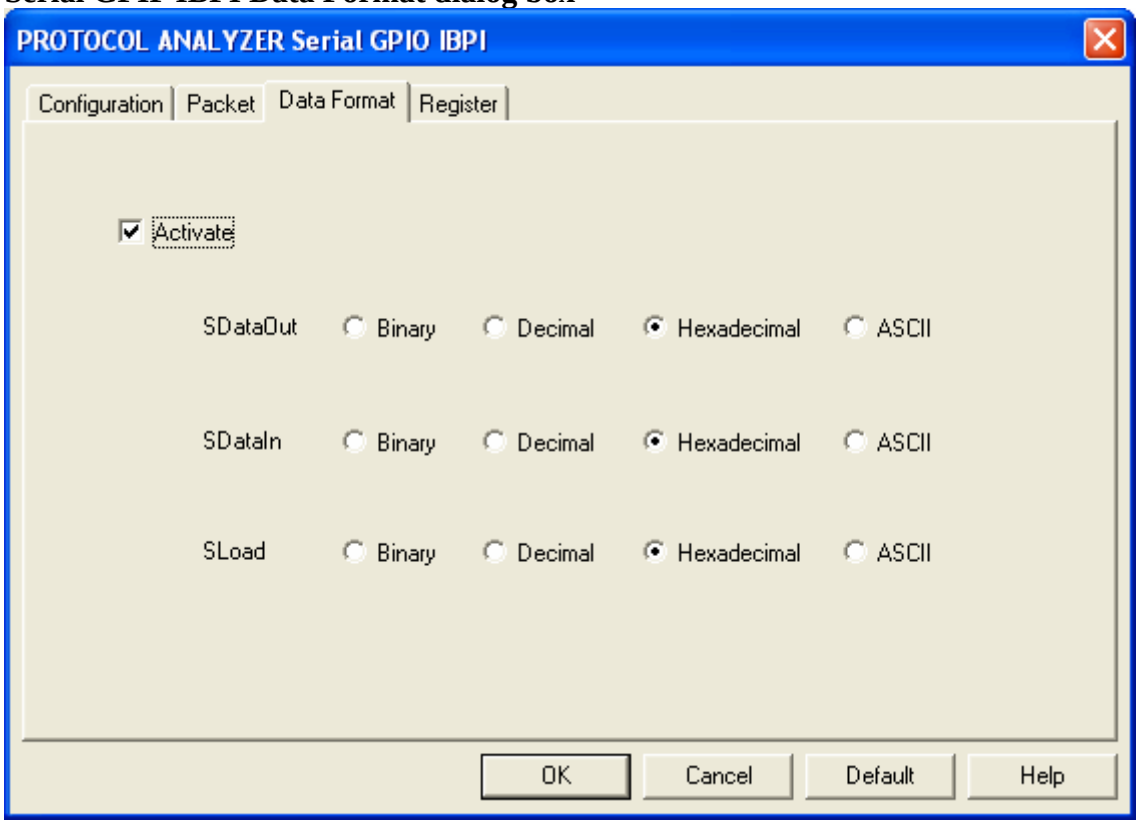
Serial GPIP IBPI Packet dialog box



In the Packet part, users can select the items to be displayed and the colors as their requirements.

Serial GPIP IBPI Data Format dialog box



Users can set the Data Format as their requirements. The three items (SDataOut, SDataIn and SLoad) can be set as Binary, Decimal, Hexadecimal or ASCII (Hexadecimal by default). When selecting the option Activate, the format is decided by the settings in the Protocol Analyzer; when not selecting the option Activate, the data

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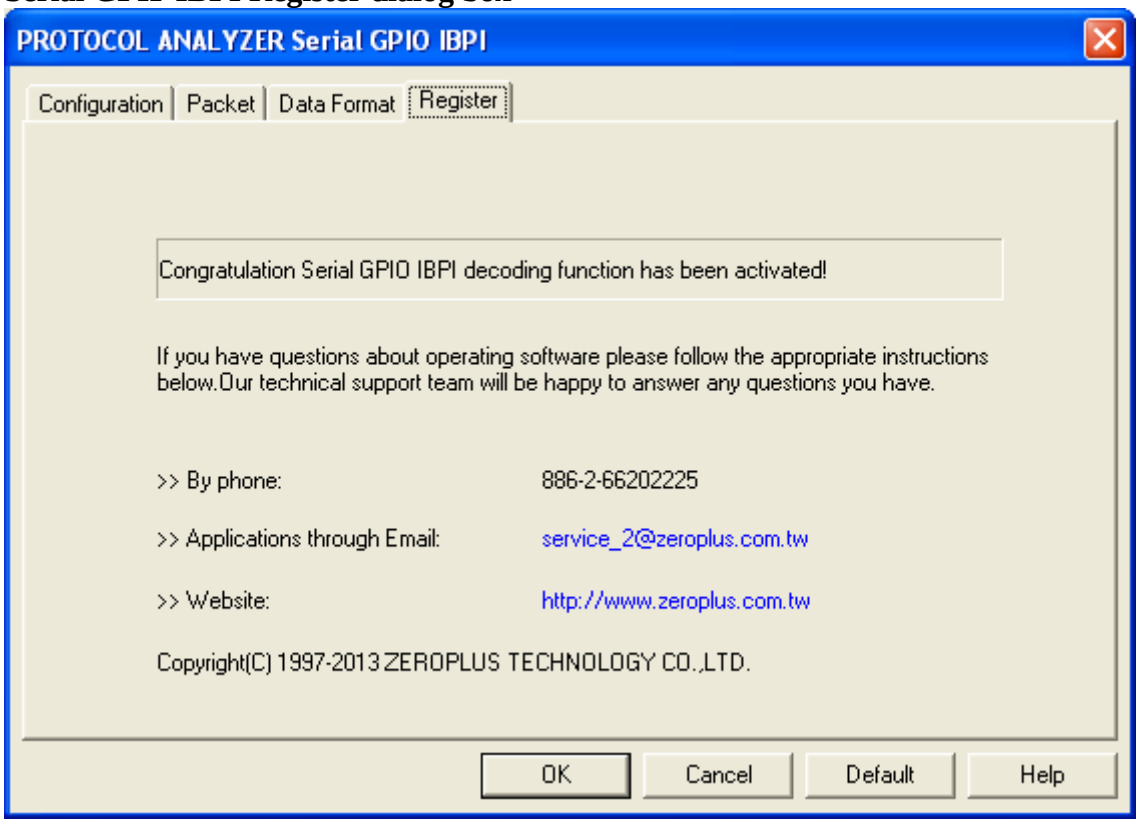
format is decided by the settings in the main program.

Serial GPIP IBPI Register dialog box



There is Zeroplus company information. If you have questions about software operations, you can contact Zeroplus by Telephone or Email.

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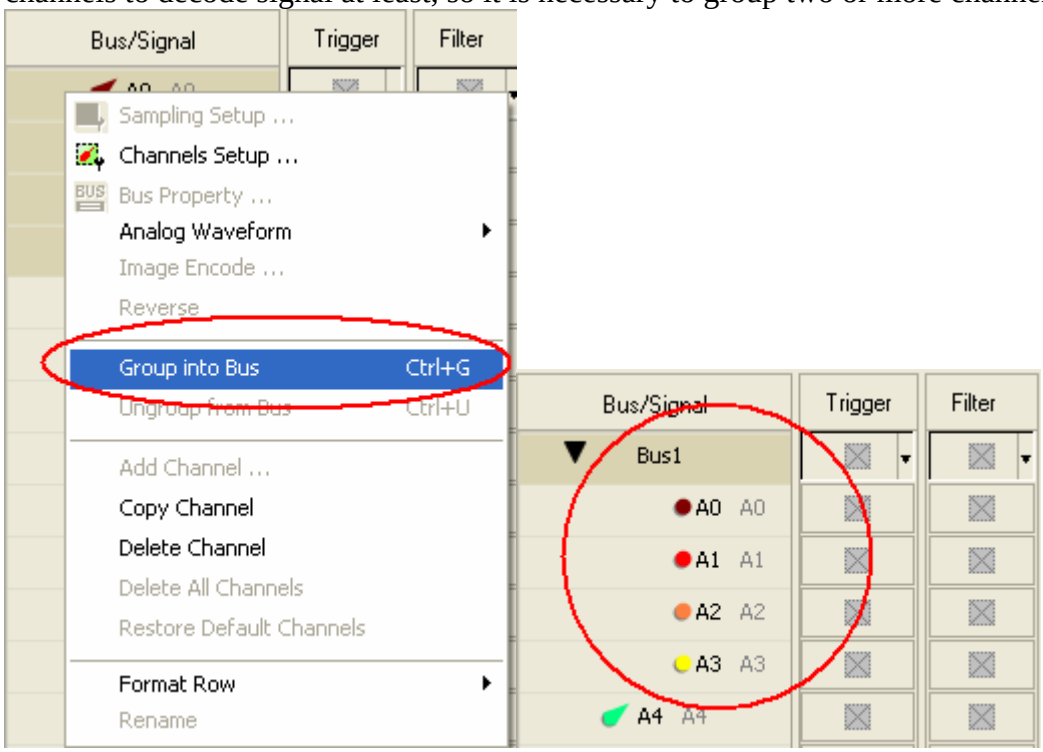
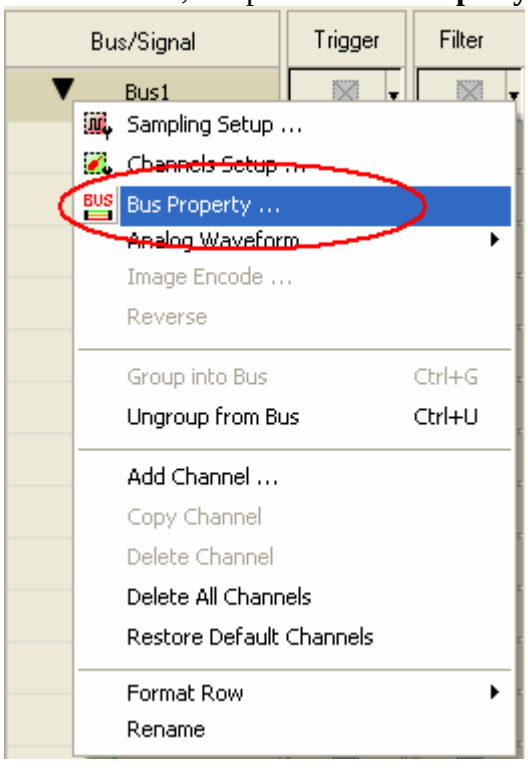
3 Operating Instructions

STEP 1. Group A0-A3 into **Bus1** by pressing the **Right Key** on the mouse. Serial GPIO IBPI needs two channels to decode signal at least, so it is necessary to group two or more channels into the Bus.



STEP 2. Select **Bus1**, press Right Key and select **Bus Property** from the popped menu**,** or click the **Bus** icon on the toolbar, to open the **Bus Property** dialog box.



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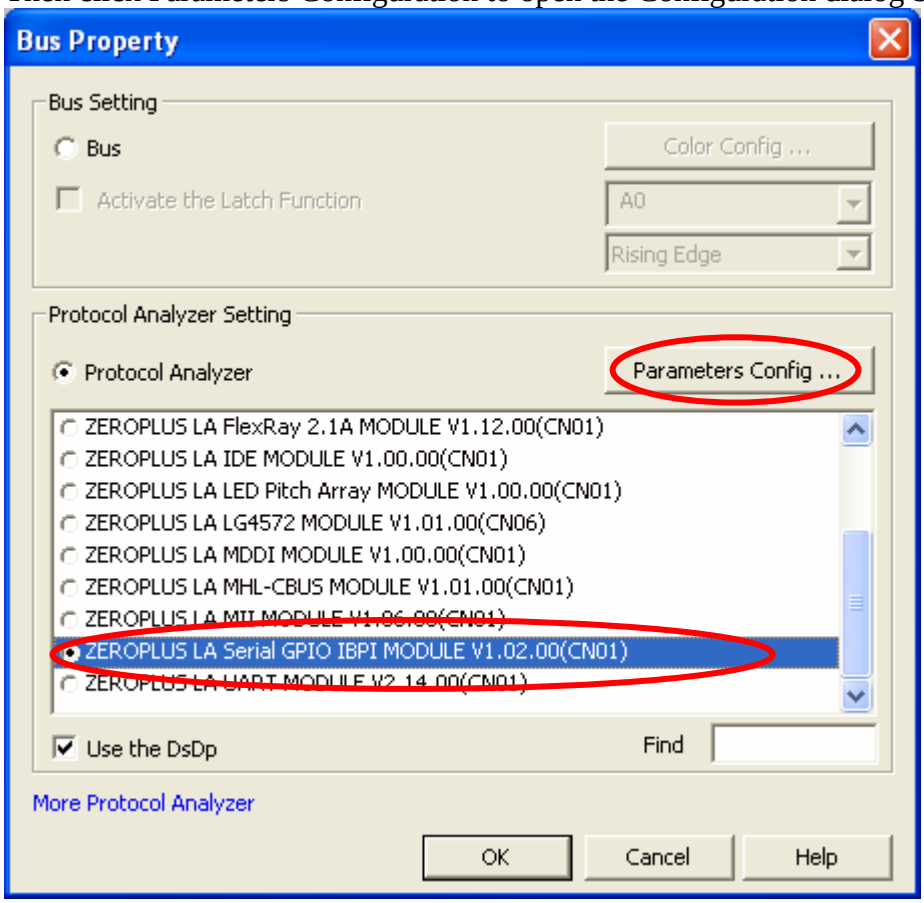
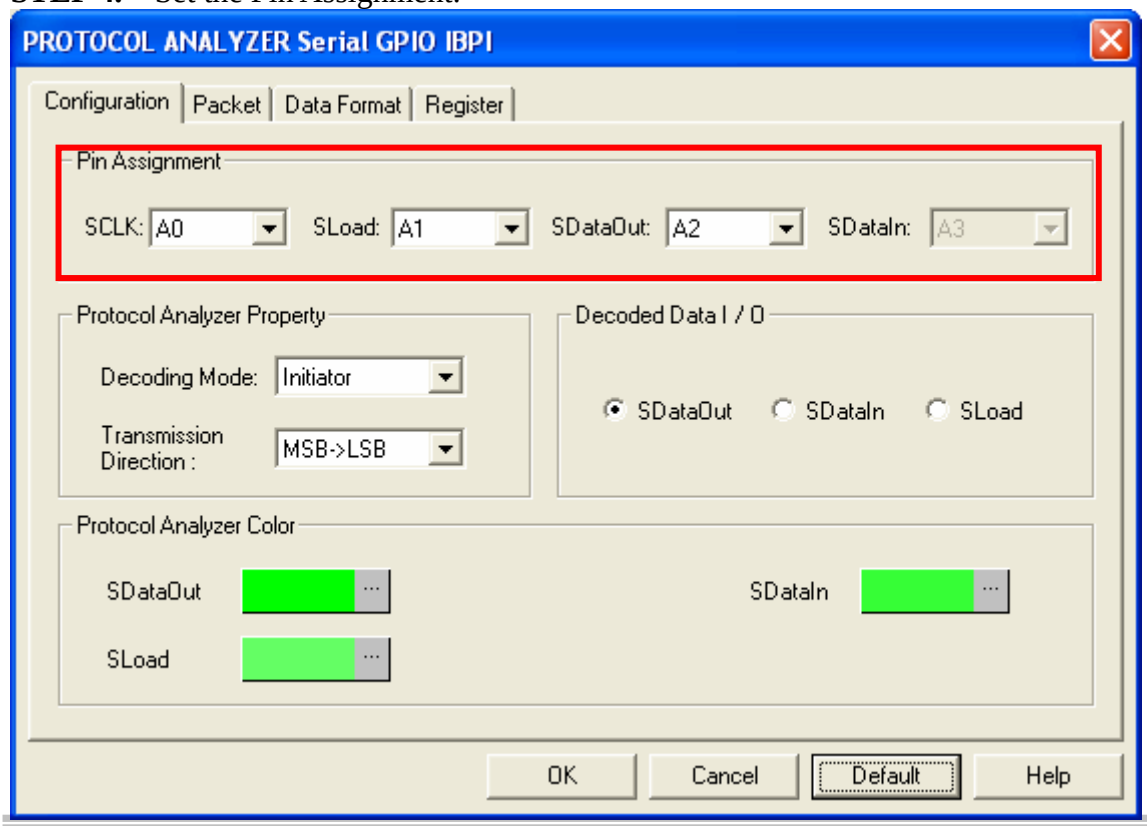
STEP 3. Select Protocol Analyzer, and select ZEROPLUS LA Serial GPIO IBPI MODULE V1.02.00(CN01). Then click Parameters Configuration to open the Configuration dialog box.



STEP 4. Set the Pin Assignment.



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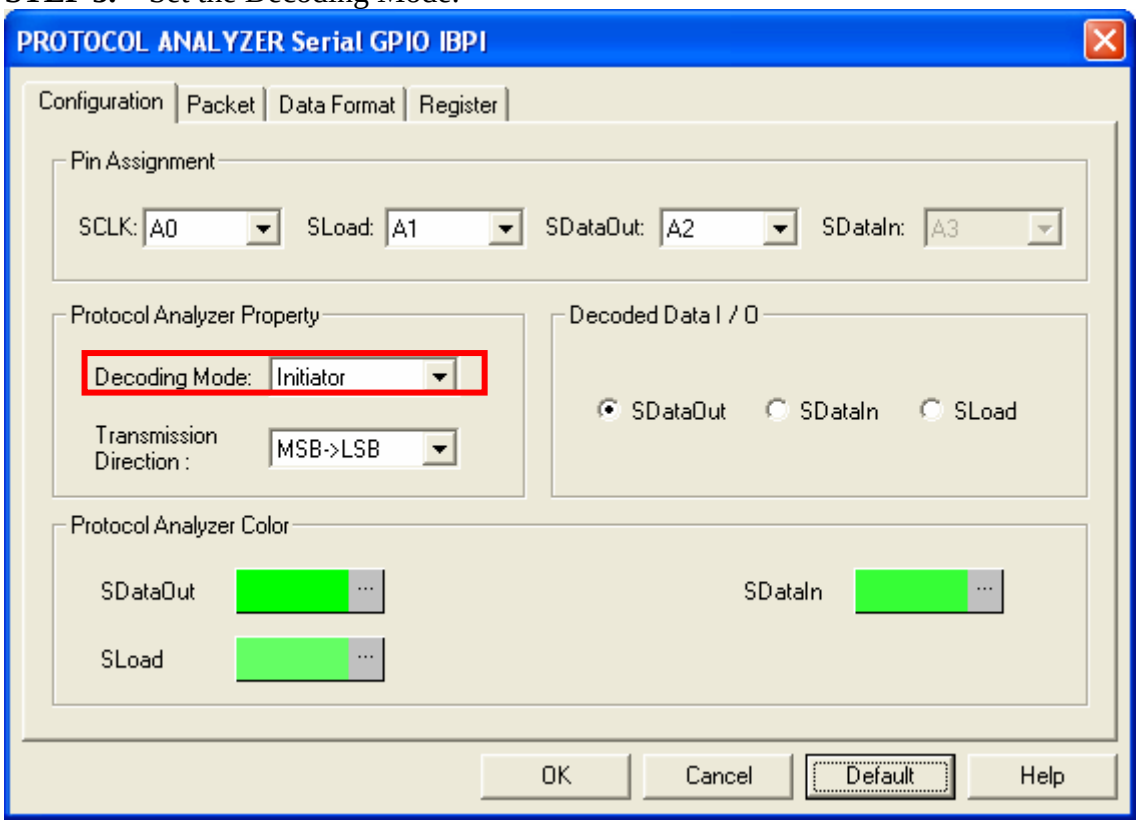
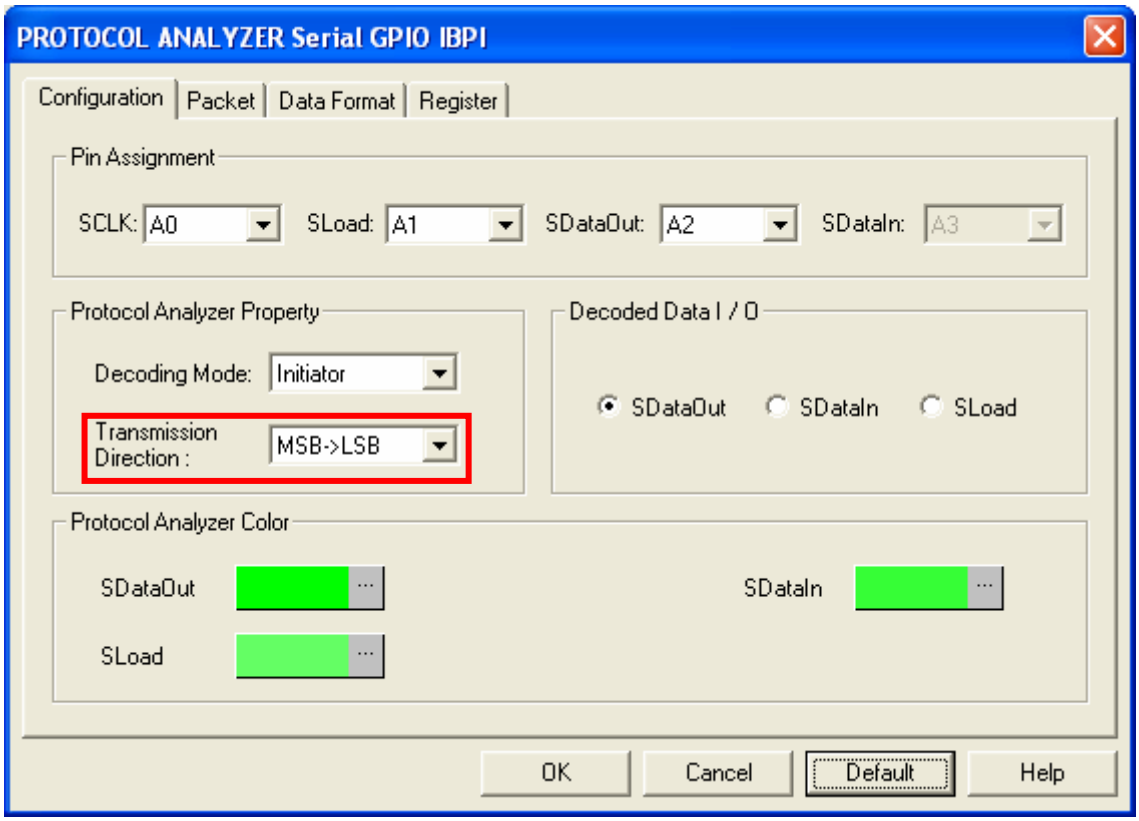
STEP 5. Set the Decoding Mode.



STEP 6. Set the Transmission Direction.



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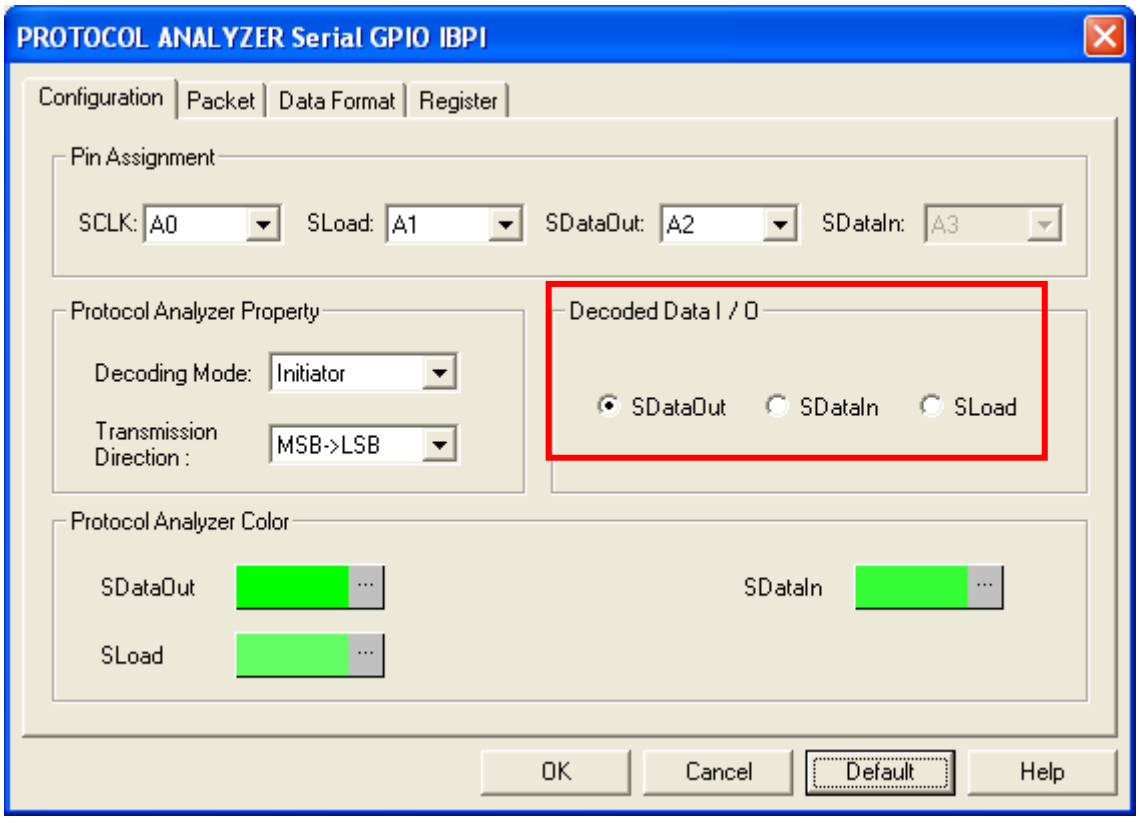
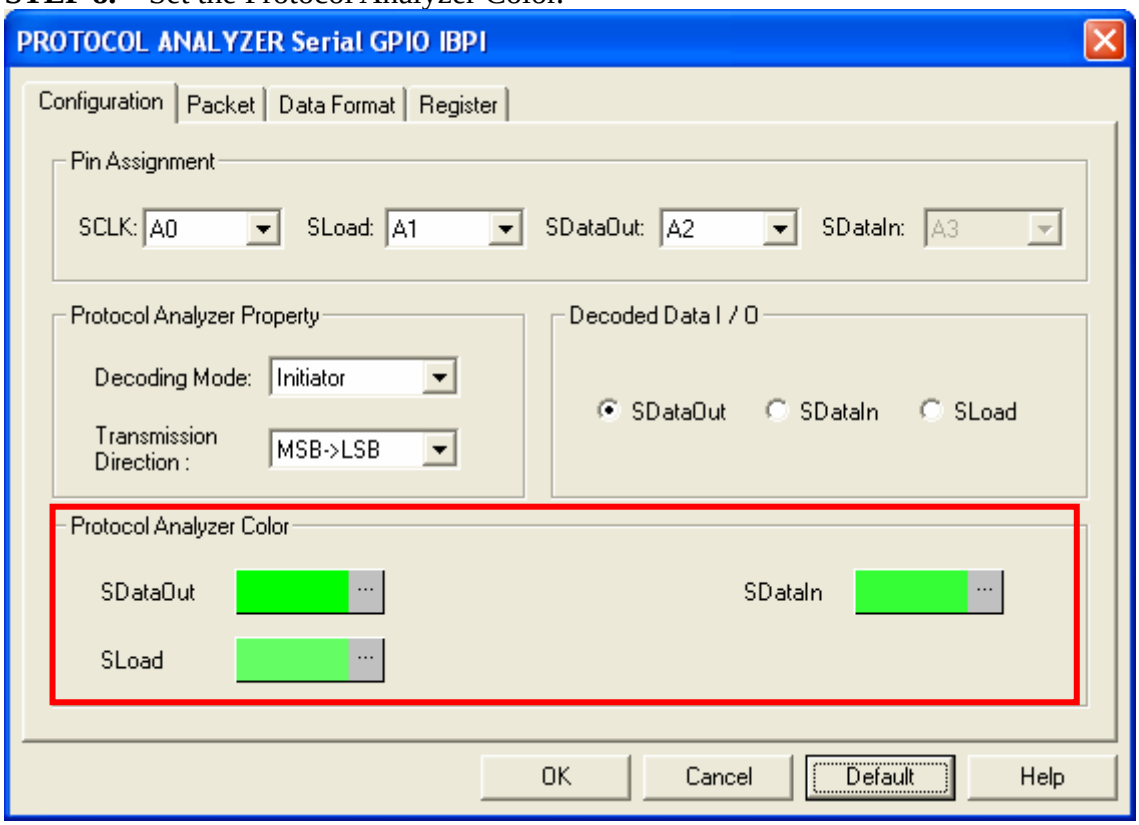
STEP 7. Set the Decoded Data I/O.



STEP 8. Set the Protocol Analyzer Color.



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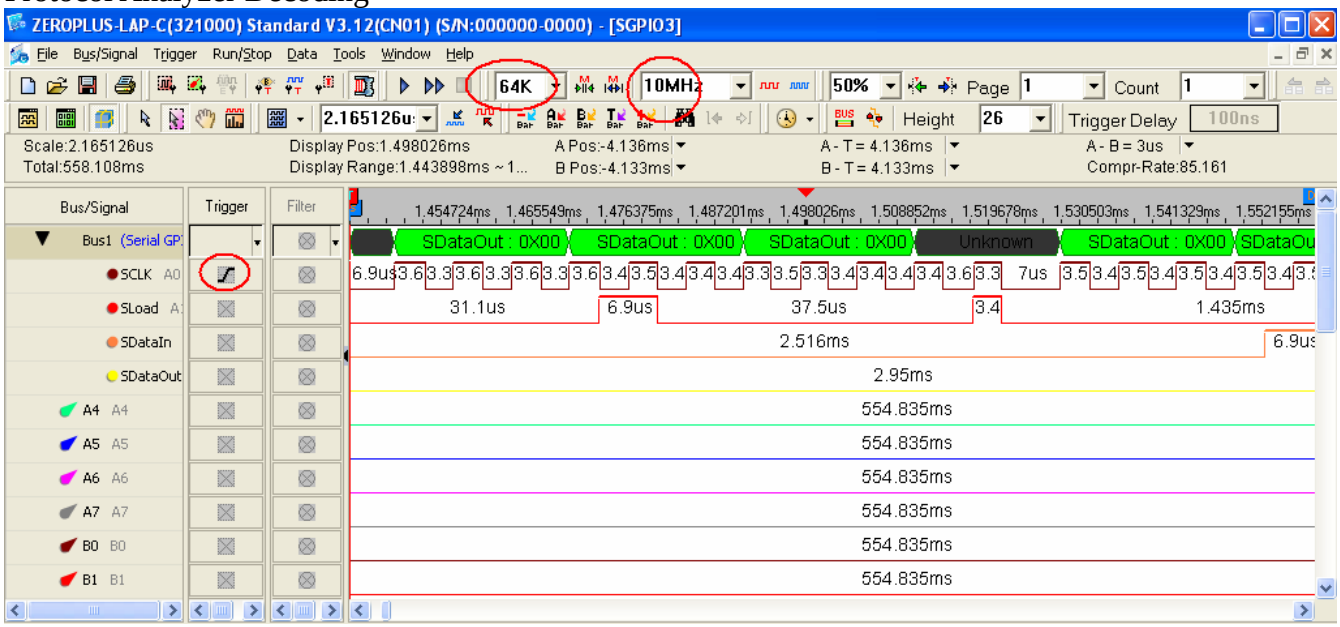
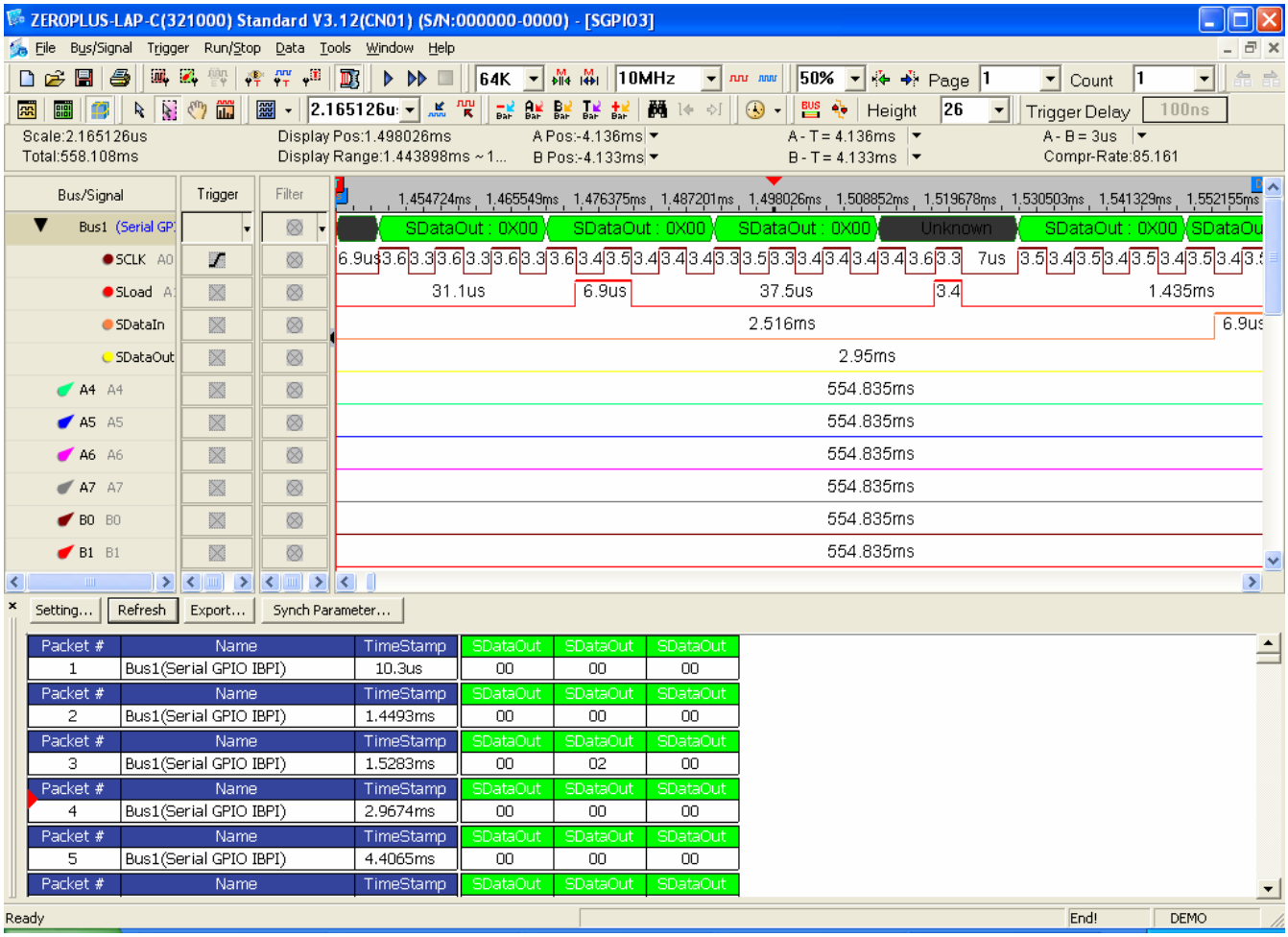
STEP 9. Following pictures show the completion of the protocol analyzer decoding and the packet list. The Trigger condition is set as Rising Edge; the Memory depth is 64K; the Sampling frequency is 10MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List



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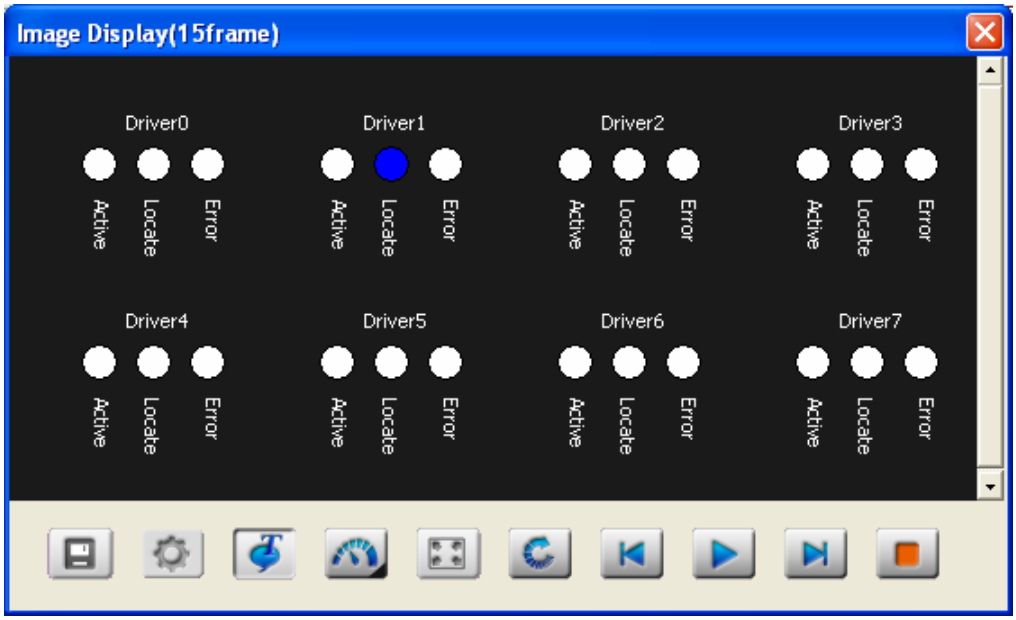
4 Function Description

4.1 Image Encode

This function can decode the data format of protocol analyzer and display the decoded data in images. (Only LAP-A, LAP-C and smart+ are supported.)

4.1.1 Interface



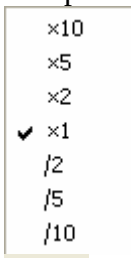
8 devices are displayed by default. In case of more than 8 devices, drag the right slider to see other images. The device quantity shall be counted from decoding signal lines. For easy identification, Activity is showed in green; Locate in blue; and Error in red.


Capture: This function is not supported in this module.


Setup: Set the Image Encode. It is disabled.


Display Amount: Show the page number of current data on the right of title.


Play Speed: These speeds are in proportion with the time bit length of data. For example, x10 indicates the speed is 1/10 of the time bit length of data Click it to select the play speed.




Full Screen: This function is not supported in this module; it is disable.


Loop: Show the data repeatedly.

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 **Play/Pause**: Click the play button to play while it changes to the pause button, click the pause button to pause and display the current data while it changes to the play button.

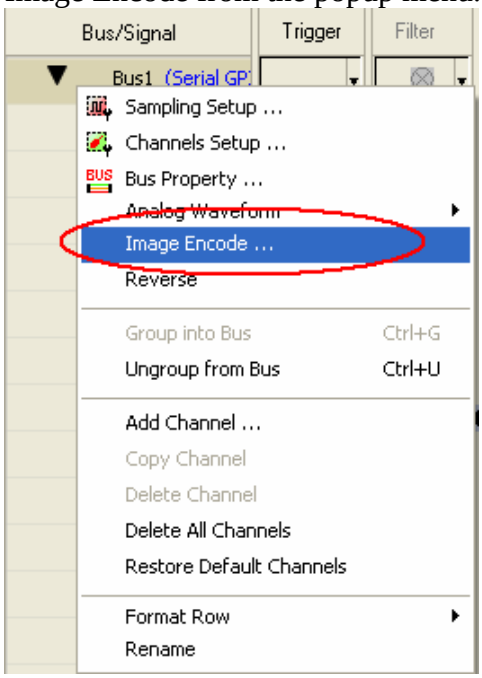
 **Stop**: Stop the playing.

 : Show the previous data in default display mode, or move one grid rightward in moving display mode.

 : Show the next data in default display mode, or move one grid leftward in moving display mode.

4.1.2 Operating Instructions

STEP 1. After decoding finished, press right key on the Bus name (Bus(Serial GPIO IBPI)) and select the Image Encode from the popup menu.



STEP 2. The interface of Image Encode.